

IN THE CLAIMS

Amend the claims as follows:

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MAY 11 1983*
Claims 1-35 (cancelled).

Claim 36. **(Currently amended)** An immunoassay kit comprising a dry solid phase coated with an HCV NS3 protein antigen which has been reduced by a reducing agent.

Claim 37. **(Currently amended)** An immunoassay kit comprising a dry solid phase coated with an HCV NS3 protein antigen which wherein said immunoassay kit has been produced by adding a reducing agent in at least one of the following steps:

- (i) coating of said solid phase with said antigen;
- (ii) blocking said solid phase;
- (iii) fixation of the proteins coated on said solid phase;
- (iv) pretreatment of said solid phase.

Claim 38. **(Currently amended)** An immunoassay kit comprising an HCV NS3 protein antigen and a reducing agent on a dry solid phase.

Claim 39. (Previously added) The immunoassay kit according to any of claims 36 to 38 wherein said HCV NS 3 protein is an HCV NS3 amino acid sequence selected from the group consisting of SEQ ID NO:3-18.

Claim 40. (Previously added) The immunoassay kit according to any of claims 36 to 38 wherein said HCV NS3 protein is contained in a fusion protein.

Claim 41. (Previously added) The immunoassay kit according to claim 39 wherein said HCV NS3 protein is contained in a fusion protein.

Claim 42. (Withdrawn) The immunoassay kit according to claim 40 wherein said fusion protein is selected from the group of amino acid sequences consisting of SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30 and SEQ ID NO:32.

Claim 43. (Withdrawn) The immunoassay kit according to claim 41 wherein said fusion protein is selected from the group of amino acid sequences consisting of SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30 and SEQ ID NO:32.

Claim 44. (**Currently amended**) The immunoassay kit according to any of claims 36 to 38 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof containing at least one epitope, said protein or part thereof containing at least

one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acid selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 45. **(Currently amended)** The immunoassay kit according to claim 39 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof containing at least one epitope, said protein or part thereof containing at least one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acid selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 46. **(Currently amended)** The immunoassay kit according to claim 40 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof containing at least one epitope, said protein or part thereof containing at least one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acids selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 47. **(Currently amended)** The immunoassay kit according to claim 41 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof

containing at least one epitope, said protein or part thereof containing at least one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acid selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 48. **(Currently amended)** The immunoassay kit according to claim 42 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof containing at least one epitope, said protein or part thereof containing at least one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acid selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 49. **(Currently amended)** The immunoassay kit according to claim 43 wherein said HCV NS3 protein is an HCV NS3 helicase protein or part thereof containing at least one epitope, said protein or part thereof containing at least one amino acid selected from the group consisting of S1200, A1218, A1384, P1407, V1412, P1424, and F1444; or a combination of one of said at least one amino acid with at least one amino acid selected from the group consisting of L1201, S1222, I1274, S1289, T1321, A1323, T1369, L1382, V1408, A1409, and F1410.

Claim 50. (Previously added) The immunoassay kit according to any of claims 36 to 38 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 51. (Previously added) The immunoassay kit according to claim 39 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 52. (Previously added) The immunoassay kit according to claim 40 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 53. (Previously added) The immunoassay kit according to claim 41 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 54. (Previously added) The immunoassay kit according to claim 42 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 55. (Previously added) The immunoassay kit according to claim 43 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 56. (Previously added) The immunoassay kit according to claim 44 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 57. (Previously added) The immunoassay kit according to claim 45 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 58. (Previously added) The immunoassay kit according to claim 46 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 59. (Previously added) The immunoassay kit according to claim 47 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 60. (Previously added) The immunoassay kit according to claim 48 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 61. (Previously added) The immunoassay kit according to claim 49 wherein said HCV NS3 protein is an HCV NS 3 protein treated by a method comprising the steps of sulphonation and subsequent desulphonation.

Claim 62. (Previously added) The immunoassay kit according to claim 50 wherein said HCV NS3 protein is additionally treated with a zwitter-ionic detergent.

Claim 63. (Previously amended) The immunoassay kit according to claim 62 wherein said HCV NS3 protein is treated with *n*-dodecyl-N,N-dimethylglycine as zwitter-ionic detergent.

Claim 64. (Previously added) A method for producing an immunoassay kit according to any of claims 36 to 38 wherein said reducing agent is present in at least one of the following steps:

- (i) coating of said solid phase with said antigen; and
- (ii) after (i), blocking said solid phase; and
- (iii) after (ii), fixation of the proteins coated on said solid phase; and
- (iv) after (iii), pretreatment of said solid phase.

Claim 65. (Previously added) The method according to claim 64 wherein said reducing agent is added in step (i).

Claim 66. (Previously added) The method according to claim 64 wherein said reducing agent is added in step (ii).

Claim 67. (Previously added) The method according to claim 64 wherein said reducing agent is added in steps (i) and (ii).

Claim 68. (Previously added) The method according to claim 64 wherein said reducing agent is added in step (iii).

Claim 69. (Previously added) The method according to claim 64 wherein said reducing agent is added in steps (i) and (iii).

Claim 70. (Previously added) The method according to claim 64 wherein said reducing agent is added in step (iv).

Claim 71. (Previously added) The method according to claim 64 wherein said reducing agent is added in steps (i) and (iv).

Claim 72. (Previously added) The method according to claim 64 wherein said reducing agent is DTT, DTE or TCEP.

Claim 73. (Previously added) The method according to claim 64 wherein said reducing agent is used in a concentration range of 0.1 mM to 1 M.

Claim 74. (Previously added) The immunoassay kit according to any of claims 36 to 38 which is an ELISA kit, a QUICK test kit or a Line Immunoassay kit.

Claim 75. (Previously added) The method according to claim 64 wherein said produced immunoassay kit is an ELISA kit, a QUICK test kit or a Line Immunoassay kit.

Claim 76. (**Currently amended**) The immunoassay kit according to any of claims 36 to 38 ~~for detecting antibodies to an HCV NS3 protein in a sample wherein said solid phase is selected from the group consisting of a microtiter plate, a nylon strip, a nitrocellulose strip and a silicon chip.~~

Claim 77. (**Currently amended**) The immunoassay kit according to claim 76 wherein said ~~sample is a biological sample~~ solid phase further comprises at least one of a positive control and a +/- cutoff control.

Claim 78. (**Currently amended**) The immunoassay kit according to any of claims 36 to 38 ~~for detecting early HCV NS3 seroconversion~~ , said solid phase further comprising at least one additional HCV antigen selected from the group consisting of an antigen of the Core region, an antigen of the E2 hypervariable region, an antigen of the NS4A region, an antigen of the NS4B region, and an antigen of the NS5A region.